SIERRA CLUB, INC., ET AL.

IBLA 91-158 Decided May 6, 1993

Appeal from a decision of the Oregon State Office, Bureau of Land Management, allowing geothermal test well drilling on lease OR 23843 (OR EA-020-0-25).

Affirmed.

1. Environmental Quality: Environmental Statements--Geophysical Exploration: Generally--Geothermal Leases: Generally--National Environmental Policy Act of 1969: Environmental Statements

   Where BLM has prepared an environmental assessment and FONSI specific to a proposal to drill two exploratory geothermal observation/flow test wells and deepen an existing exploratory test well, and its analysis of possible full-field development is limited by the absence of any development proposal, that assessment is sufficient in scope and a site-specific EIS is not necessary.

2. Environmental Quality: Environmental Statements--National Environmental Policy Act of 1969: Environmental Statements--National Environmental Policy Act of 1969: Finding of No Significant Impact

   Where review of the reasonably foreseeable impacts of geothermal test drilling failed to disclose a potentially significant impact and there was no evidence to the contrary, an environmental impact statement was not required.

3. Endangered Species Act of 1973: Generally--Geophysical Exploration: Generally--Geothermal Leases: Generally

   Where the Fish and Wildlife Service has already issued a formal consultation document on issuance of geothermal leases near a lake which harbors an endangered species of fish, and the U.S. Fish and Wildlife Service has continued to consult with BLM to help devise mitigating measures for geothermal lease issuance and exploratory drilling, BLM may correctly decline to request a second formal consultation for the geothermal test drilling.

APPEARANCES: Colin G. Harris, Esq., and Edward J. McGrath, Esq., Denver, Colorado, for Anadarko Petroleum Corporation; Adam J. Berger, Esq., Victor M. Sher, Esq., and Todd D. True, Esq., Seattle, Washington, for Sierra Club Legal Defense Fund, Inc.; Donald P. Lawton, Esq., Office of the Solicitor, Pacific Northwest Region, U.S. Department of the Interior, Portland, Oregon, for the Bureau of Land Management; Libby Chatfield, Projects Coordinator, for the Oregon Natural Resources Council, Eugene, Oregon; Linda Driskill for the Grant County Conservationists, John Day, Oregon.

OPINION BY CHIEF ADMINISTRATIVE JUDGE BYRNES

The Sierra Club, Inc., Oregon Chapter, the Wilderness Society, Oregon Trout, the Portland Audubon Society, the Oregon Natural Desert Association, the Grant County Conservationists, and the Oregon Natural Resources Council (appellants) have all appealed from a November 8, 1990, Record of Decision of the Oregon State Office, Bureau of Land Management (BLM), allowing Anadarko Petroleum Corporation (Anadarko) to drill and conduct 4-hour flow tests on two geothermal observation (test) wells and deepen a preexisting test well near Borax Lake. Appellants assert that BLM did not comply with the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4370c (1988), and the Endangered Species Act (ESA), 16 U.S.C. §§ 1531-1544 (1988), when BLM approved Anadarko's drilling proposal.

BLM began geothermal leasing in the Pueblo Valley area of Harney County, Oregon, in 1975, pursuant to the Alvord Desert Geothermal Leasing Program. BLM prepared an Environmental Analysis Record for this program and determined that an Environmental Impact Statement (EIS) was not required for issuance of the leases. Sierra Club challenged this determination, but the Ninth Circuit Court of Appeals agreed with BLM that no EIS was necessary at the leasing stage. Sierra Club v. Hathaway, 579 F.2d 1162 (9th Cir. 1978). Anadarko obtained geothermal leases, including OR-23843, from BLM on November 1, 1980. This lease does not contain a "no surface occupancy" provision or phased leasing stipulations.

On May 28, 1980, the U.S. Fish and Wildlife Service (FWS) made an emergency determination that the Borax Lake chub, a fish species resident in Borax Lake on private land adjacent to lease OR-23843, was an endangered species. FWS designated 640 acres as critical habitat for the chub, including Borax Lake, nearby hot springs, ponds, and associated shorelines. The area included 320 acres of BLM land, including small portions of Anadarko's leases near the lake, including this lease. FWS stated that: "Additional land is provided as a buffer zone around the aquatic habitat to insure its integrity." 45 FR 35821, 35822 (May 28, 1980). FWS also warned against geothermal exploration near the lake or modification of spring flow or water temperature. Id. FWS then formally proposed to declare the species endangered. 45 FR 68886 (Oct. 16, 1980). Public comment, two public hearings, and a final determination to list the Borax Lake chub as endangered ensued. 47 FR 43957 (Oct. 5, 1982).

On July 3, 1980, BLM requested that FWS provide formal section 7 consultation for the issuance of geothermal leases in the Borax Lake area. On October 10, 1980, FWS issued its biological opinion. FWS stated:

> At issue is the possible subsequent impacts of granting these geothermal exploratory leases (BLM Leasing Units 28, 33, and 34) on the Borax Lake chub, Gila boraxobius, and/or its critical habitat as listed by the Department of Interior (Federal Register 45(104):35821-35823).
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> It is our biological opinion that issuance of the geothermal exploration leases, with present stipulations, for BLM Leasing Units 28, 33 and 34 is likely to jeopardize the continued existence of the Borax Lake chub and/or adversely modify its critical habitat.
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> Subsequent geothermal development activities would be proposed in a Plan of Operations submitted by the exploratory company to USGS [United States Geological Survey]. USGS then has the federal action of approving or denying the companys [sic] plan of operation.
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> Borax Lake is a shallow natural lake, approximately 10.4 surface acres, and is situated approximately 30 feet above the surface of the surrounding land. Water is provided to the lake by several thermal springs. Salts from these springs precipitate and form a fragile borate crust comprising the periphery of the lake. Any disturbance to this borate crust causes a break in the margin of the lake at which point water may flow out of the habitat. Because of the shallow nature of the lake, the presence of natural outflow creeks, and the importance of shallow coves, to reproduction of the species, any disturbance to the borate crusts is potentially very harmful to the species.
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> Significant changes in other physical or chemical properties of the water could adversely modify the critical habitat of the species. Therefore, it is important to maintain the integrity of the springs flowing into Borax Lake as well as Borax Lake itself.
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> The primary components of geothermal exploration that may adversely impact the listed species and/or its habitat are drilling activities, which may interfere with the aquifers that supply water to Borax Lake, and surface disturbance, which may destroy fragile borate crusts surrounding Borax Lake or interfere with outflow waters.

* * * * * * *

> Disturbances to the hot or cold aquifers that supply water to Borax Lake could change the inflow rates of certain aquifers and thereby change the physical and chemical properties of the habitat. The critical thermal maximum of the Borax Lake chub is approximately 93-94°F. Therefore, any rise in water temperature would adversely modify the critical habitat of the species.
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> Therefore, the key issue of concern is the likelihood that drilling activity might impact this fault system or the cold aquifers. Numerous conversations with geologists and hydrologists, including those of Anadarko Production Company and USGS, indicate that increasing the distance of drilling activities from Borax Lake decreases the likelihood that these activities will impact aquifers supplying water to Borax Lake. Further, it was suggested by Anadarko Production Company representatives on September 23, 1980, that a one-half mile "buffer zone" around Borax Lake where no drilling could occur would probably provide adequate protection to the aquifers. Representatives from USGS generally concurred with this opinion but stated that the one-half mile "buffer zone" should be extended to the north to provide a "buffer zone" around the thermal springs north of Borax Lake in T. 37 S., R. 33 E., Section 11. Such a teardrop shaped "buffer zone" would also eliminate the likelihood of surface disturbance occurring in the Borax Lake area.

(FWS Biological Opinion, Oct. 10, 1980, at 1-6). FWS suggested increasing the buffer zone from 600 feet to one-half mile, intensively monitoring Borax Lake and nearby waters, establishing buffer zones around permanent pools and springs near Borax Lake, subsequent study of the hydrology of the area, and ongoing consultation with FWS. FWS added: "The Service anticipates that a Section 7 consultation will be required on the Plan of Operations submitted by the perspective exploration and development companies to USGS." Id. at 8.

After consulting with FWS and Geological Survey (GS) BLM issued the leases, including OR 23843, with stipulations outlining a buffer zone, additional monitoring, and a right to terminate drilling. After submitting a plan of operations in March 1982 for the drilling of three exploratory wells on the lease, Anadarko decided not to proceed due to decreased demand for power in the region. At the time, the Sierra Club, Oregon Chapter, approved of the 1982 proposal, including a one-half-mile buffer zone between geothermal drill sites and Borax Lake. The Minerals Management Service issued Environmental Assessment (EA) No. 187-82 in July 1982 addressing the proposal, which contained a Finding of No Significant Impact (FONSI).

On February 4, 1987, FWS approved a recovery plan for the chub. This plan outlined monitoring, management, and maintenance of critical habitat designed to preserve Borax Lake and the chub. The plan notes, at page 21,

that Anadarko conducted extensive monitoring of Borax Lake from June 1982 to February 1983. The plan recommended closing Borax Lake to mineral and geothermal exploration (Recovery Plan at 31).

In January 1987, the Burns District, BLM, FWS, the Nature Conservancy and the Oregon Department of Fish and Wildlife prepared a joint Borax Lake Chub Habitat Management Plan (HMP). This plan stated (at page 14) that "[i]mplementation of this HMP will have little serious impact on these activities. Leases currently let for BLM administered lands in the HMP area already contain stipulations covering Objective 1 of this plan (Appendix I) [regarding monitoring requirements]. Gates will be provided in the exclosure to allow necessary access for lessees." The plan provided also for periodic review of findings.

On October 26, 1988, Anadarko submitted a proposal to drill an observation well, 25-22A. BLM approved the proposal following the completion of EA OR-020-8-62. Anadarko drilled the well in October 1989 and encountered geothermal fluids which flow-tested favorably without detectable impact on Borax Lake (EA at 2). Anadarko then submitted the proposal in dispute here.

Anadarko proposed to drill two additional 2,500-foot deep geothermal observation/flow test wells, 52-22A and 66-22A, 4-hour flow test them, and deepen the existing observation well, 25-22A. The drilling would occur on OR-23843 just south of Borax Lake in Harney County, Oregon. The proposed project area is about 6.5 miles northeast of Fields, Oregon, and approximately a mile southwest of Borax Lake in the Pueblo Valley. The purpose of these wells is "to acquire additional subsurface geologic and geothermal reservoir data to be used in a detailed hydrologic analysis of the Pueblo Valley area" (EA at 1).

On March 26, 1990, BLM released a draft EA for public comment on Anadarko's proposal. In April 1990, BLM received comments on the draft EA from appellants Portland Audubon Society, Oregon Trout and Oregon Natural Desert Association and also the Oregon Chapter and Rogue Group of the Sierra Club. The Rogue Group-Sierra Club and Oregon Trout found the draft EA and plan of operations satisfactory, except for a need for temperature monitoring of Borax Lake during drilling. The Oregon Chapter, Sierra Club, requested an EIS, objecting to the preparation of incremental EA's for each progressive step toward development. The comments did not contain (or refer to) any expert opinions suggesting that flow testing might adversely affect Borax Lake. The final version of the EA, OR-020-0-25, was released on July 3, 1990.

On November 8, 1990, BLM issued its Decision Record, containing a FONSI, and approving, with modifications, Anadarko's plan to deepen the existing geothermal well and drill two new geothermal observation wells and flow test them should they encounter geothermal fluids. BLM based the FONSI on seven factors:

1. Monitoring of environmental parameters during the 10\89 22-hour flow test showed no changes in those parameters outside their normal variances.

2. The U.S. Fish and Wildlife Service, The Nature Conservancy and BLM agree that the proposed drilling and two 4-hour flow tests are unlikely to affect Borax Lake due to the distance from the lake and short flow duration.

3. Mitigation efforts for plant and animal species for this proposed exploration drilling are detailed in the EA and addendum to the EA, and discussed in the responses to the comments in the EA. This mitigation would be incorporated in the Conditions of Approval attached to the permits.

4. Surface impacts associated with the proposed drilling and testing are temporary in nature. The drilling pads would be restored to pre-work characteristics.

5. Dust resulting from drilling pad construction and road traffic is temporary and would be mitigated by watering.

6. No cultural resource conflicts are anticipated at the proposed drill pad locations.

7. Noise from drilling operations would be muffled, and is not expected to adversely impact wildlife. It would be virtually undetectable by local residents.

(FONSI at 1). In the final Decision Record for EA OR-020-0-25, prepared for this proposal, BLM considered no action and permitting the proposed drilling and flow testing. BLM based its decision to allow the proposed drilling and flow testing on the following:

1. [The proposal] provides for limited exploration with the greatest amount of precaution and protection from adverse impacts to the surrounding environment, including Borax Lake and the endangered Borax Lake chub. As such, it meets the requirements of the U.S. Fish and Wildlife Service for protection of the Borax Lake chub.

2. Anadarko will have geochemical and stable isotope analyses done on effluent from the wells and samples from Borax Lake. This, in combination with information obtained from drilling and testing, may provide information on the issue of connectivity between Borax Lake and the geothermal reservoir.

(Decision Record at 1).

Appellants brought this appeal, arguing that BLM had flouted the consultation and EIS preparation requirements of the ESA and NEPA. Specifically, appellants charge that BLM should have prepared an EIS analyzing the cumulative impacts of all reasonably foreseeable geothermal development in the Borax Lake area and the uncertainty and controversy regarding the scientific evidence surrounding the tests before it approved Anadarko's Plan of Operations.

Even if an EIS was not required, appellants contend that the EA prepared in this matter was flawed because it failed to consider an adequate range of alternatives, and failed to disclose the existence of unknown or uncertain information regarding the environmental impacts of the flow test. Additionally, appellants charge that BLM should have consulted with GS because of its expertise in the field and failed to initiate formal consultation with FWS as required by the ESA.

Anadarko responds that this test drilling would provide information necessary to determine if EIS preparation was necessary and to make any formal ESA consultation meaningful. Additionally, it contends that the uncertain nature of drilling does not convert this flow test into an action that will significantly affect the environment. Anadarko further contends that, given the limited nature of the action and the speculative nature of any future exploration or lease development, an EA is adequate.

BLM echoes Anadarko's arguments and states that it properly consulted with appropriate agencies in reaching its decision and that, at this stage, further test drilling is appropriate with the protective stipulations that have been imposed on the Plan of Operations.

This case presents issues of whether the environmental review and consultation in this case conform to the requirements of NEPA and the ESA.

National Environmental Policy Act

[1] The Geothermal Steam Act of 1970, 30 U.S.C. § 1002 (1988), empowered the Secretary of the Interior to issue leases for the development and use of geothermal resources on public lands. The Department of the Interior issued a programmatic EIS for its entire geothermal leasing program in October 1973. In 1975, BLM prepared an EA for the Alvord Known Geothermal Resource Area in preparation for competitive bid sale of leases, including the one at issue. The Ninth Circuit Court of Appeals effectively ruled that no EIS was necessary at the leasing stage because leasing itself had no significant impact on the environment, and it denied the Sierra Club injunctive relief. Sierra Club v. Hathaway, supra.

The Ninth Circuit cited the six phases of geothermal resource development and production outlined in the programmatic EIS.

> According to this EIS, the development and production of geothermal resources involved six phases: exploration, test drilling, production testing, field development, power plant and power line construction, and full-scale operations. For purposes of this appeal, we need only concern ourselves with the exploration phase.
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> This initial phase encompasses locating and defining commercial geothermal reservoirs and evaluating the impact of

> possible site-specific geothermal development upon the environment. Exploration operations include, but are not limited to, geophysical operations, drilling of shallow temperature gradient wells, construction of roads and trails, and cross-country transit by vehicle over public lands. 43 C.F.R. § 3209.0-5(a). [Footnote omitted.]

Sierra Club v. Hathaway, supra at 1165. After unsuccessfully arguing that an EIS should have been prepared at the leasing stage, appellants insist that a full EIS should be prepared now for these drill tests, with analysis of full-field development. However, full-field development is not a foregone conclusion.

It is difficult to imagine a more limited plan for exploration of the potential of this geothermal resource. It is not yet apparent whether there will be any geothermal production from these leases, let alone full-field development. As discussed below, this test drilling proposal will allow all parties to gather information needed to analyze the potential of any development of the leases. No further development can be contemplated without some idea of the potential for production.

Anadarko has not advanced any proposal for this lease, other than the drilling and limited flow tests. There is, therefore, no proposal before BLM for any action other than the drilling of two observation wells and the performance of 4-hour flow tests. Thus, there is no other proposal to be reviewed. Accordingly, BLM has properly declined to consider the effect of construction of full-scale geothermal production facilities. See Red Thunder, 117 IBLA 167, 179, 97 I.D. 263, 270 (1990).

[2] Appellants contend that BLM erred in determining that the proposal outlined in the Plan of Operations would not have any significant impacts. Appellants further allege that the existing analysis is out-of-date and the EA improperly scoped. Appellants assert that some of the analysis is now 10 years old, partly delayed by resulting litigation.

An EIS is required when a Federal agency proposes to engage in a major Federal action that would "significantly affect the quality of the human environment." 42 U.S.C. § 4332(2)(C) (1988). Where BLM, after reviewing the environmental impacts of a proposed action, concludes that the impacts would not be significant and decides not to prepare an EIS, we will affirm that decision provided it has taken a hard look at the situation, identified relevant areas of environmental concern, and made a convincing case either that an impact would be insignificant or, if significant, would be reduced to a minimum. See, e.g., Nez Perce Tribal Executive Committee, 120 IBLA 34, 37-38 (1991), and cases cited therein.

BLM properly limited its review to the reasonably foreseeable impacts of the proposal itself, i.e., the proposal to renew test drilling. BLM concluded this proposal would not create significant impacts and appellants have not demonstrated otherwise. A determination that a proposed action will not have a significant impact on the quality of the human environment

will be affirmed on appeal if the record establishes that a careful review of environmental problems has been made, all relevant areas of environmental concern have been identified, and the final determination is reasonable in light of the environmental analysis. A party challenging the determination must show that it was premised on a clear error of law, demonstrable error of fact, or that the analysis failed to consider a substantial environmental question of material significance to the proposed action. The burden of proof is on the challenging party, and such burden must be met by objective proof. Mere differences of opinion provide no basis for reversal.

To insure that any impacts from the proposal would be reduced to insignificance, BLM imposed various stipulations on the approval of the plan. Particularly, BLM's retention of the authority to terminate the proposed action at any time during the flow test assures that the status quo can be maintained. Even if an action might have significant effects, a stipulation such as this can mitigate those effects to the point they are no longer significant. Glacier-Two Medicine Alliance, 88 IBLA 133, 148 (1985).

While there are differing interpretations of various geologic data, the record supports BLM's contention that it has made a thorough study of the geology and hydrology of the area. BLM also makes a convincing case that additional information from the proposal at hand would be useful in future decision making, and that there are no significant impacts contemplated in the limited test drilling.

Endangered Species Act

[3] Appellants contend that the FWS biological opinion, issued in 1980, was limited in scope to the issuance of geothermal exploration leases in the area of Borax Lake and that section 7 consultation would be required later in a plan of operations submitted by the exploration and development companies (Appellants' Statement of Reasons at 62 citing Biological Opinion at 2, 8). FWS approved of the leasing and anticipated additional consultation at some future time. The 1980 biological opinion did suggest protective measures designed to protect the chub during exploration operations. FWS continued to participate in the development of mitigating measures, on an informal basis, thereafter. This ongoing informal consultation and the initial stipulations devised in 1980 show that FWS did seriously consider potential impacts of exploratory drilling on the Borax Lake chub. FWS acted to avoid or mitigate any potential impacts, partially by prompting the stipulation barring drilling during the hottest months of the year. 1/ This stipulation is operational by design. Restrictions on the timing of exploration drilling assume that such drilling may occur. Appellants cannot realistically claim that FWS did not consider exploration activities.

1/ Limiting drilling to cooler months is designed to maintain the lake temperature within the species tolerance if geothermal drilling in the area does raise the temperature of the lake.

However, appellants are correct in observing that FWS did not analyze the potential effects of production facilities or possible full field development. Appellants argue that FWS has not had adequate information; the proposed test drilling would help supply that information. FWS has participated in the development of stipulations on the basis of the theoretical information available so far. A letter from BLM to FWS, dated February 28, 1989, suggests that FWS had ongoing access to proprietary data.

FWS issued a formal consultation document in 1980, declaring that leasing could proceed, given the imposition of mitigating measures such as those imposed by BLM. Appellants' insistence on formal consultation instead of informal consultation at this stage is premature. It is at best circular to fault BLM and FWS for not considering the very kind of information that the exploration test could provide. The information garnered from this exploratory drilling will not only assist Anadarko in determining whether it wishes to proceed beyond the exploration testing stage. Such information will also provide BLM and FWS with a basis for analyzing any further proposals, if presented. While the appellants would prefer this information be obtained in other ways, it is within the authority of BLM to proceed in this manner as long as the foreseeable environmental impacts are considered. See Dorothy A. Towne, 115 IBLA 31, 35-39 (1990). The information provided may well clarify any scientific debate that surrounds the geology and hydrology of the area.

Not only does a second round of formal consultation with FWS seem premature, FWS stated in its May 1, 1990, comments on the draft EA that it "believes that the likelihood that the proposed drilling activity will affect the Borax Lake chub or its habitat is low based upon the small volume which will be extracted and the short duration of the test. At this time the Service believes there is insufficient new information available regarding the subsurface geology and hydrology to reinitiate formal consultation." Thus, FWS not only concludes that the impact on the chub is insignificant, but that its further decision making would also benefit from the information gained through the proposal in question.

We find that the record reasonably supports the BLM decision and that there was no abuse of discretion in postponing a second formal consultation with FWS, particularly in view of the continuing involvement of FWS on an informal basis.

Appellants have the burden of proving by a preponderance of the evidence that the BLM decision was incorrect. The record now before us clearly indicates that BLM carefully reviewed the environmental impact of approving the Plan of Operations. BLM determined, in consultation with FWS, that when mitigated by the stipulations, those impacts would be insignificant. Appellants have not demonstrated that these conclusions are erroneous. The EA adequately supports BLM's FONSI and its decision to approve the Plan of Operations. Therefore, we affirm the BLM decision to approve Anadarko's plan of operations.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision of the Oregon State Office is affirmed.

James L. Byrnes

Chief Administrative Judge

DEPUTY CHIEF ADMINISTRATIVE JUDGE HARRIS CONCURRING:

I agree with Chief Administrative Judge Byrnes' disposition of the interrelated issues in this case. Those issues concern the Bureau of Land Management's (BLM's) alleged failure to comply with the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA) and their implementing regulations. The issues are interrelated because appellants' principal concern is that by failing to prepare an environmental impact statement (EIS), BLM has not adequately addressed the environmental impact of all reasonably foreseeable geothermal development on Borax Lake, the critical habitat for the Borax Lake chub, an endangered species of fish. 1/

While NEPA is merely a procedural statute designed to bring to the attention of agency decisionmakers the environmental consequences of major Federal actions, ESA is both a procedural and a substantive statute. ESA provides that agencies adhere to certain procedural requirements in determining the effects of Federal projects on threatened and endangered species, and it mandates that actions may not proceed which are likely to jeopardize the continued existence of such species or destroy or adversely modify their critical habitat. See Thomas v. Peterson, 753 F.2d 754, 765 (9th Cir. 1985).

Appellants argue that there is precedent for requiring an EIS to analyze and disclose the cumulative impacts of all reasonably foreseeable geothermal development in the Borax Lake area. In support of that argument, they cite Sierra Club, 79 IBLA 240 (1984), Sierra Club, Oregon Chapter, 87 IBLA 1 (1985), Sierra Club v. Peterson, 717 F.2d 1409 (D.C. Cir. 1983), and Conner v. Burford, 848 F.2d 1441 (9th Cir. 1988), cert. denied, 489 U.S. 1012 (1989). All those cases concern the issuance of leases, either geothermal resource or oil and gas.

The two Board decisions addressed appeals from BLM decisions denying protests to issuance of geothermal resource leases. Both Board decisions, in reliance on Sierra Club v. Peterson, set aside BLM's action and remanded the cases for consideration by BLM of phased or staged leasing. The Board determined that BLM could not defer preparation of an EIS regarding the potential development of geothermal resources until after the issuance of a lease unless BLM reserved the right to preclude activities found to have a significant impact on the environment. 2/ The Conner court also held in the context of the issuance of oil and gas leases that in the absence of

1/ "Undoubtedly, the single greatest environmental concern in the instant case is the impact of geothermal development on Borax Lake" (Statement of Reasons at 57).

2/ The court stated in Peterson that if the Department were "unable to preclude activities which might have unacceptable environmental consequences, then the Department cannot issue [oil and gas] leases sanctioning such activities without first preparing an EIS." 717 F.2d at 1717 (emphasis in original).

the preparation of an EIS, the Department must retain the authority to preclude environmentally harmful activities.

All of the cases cited by appellants were decided after the issuance of the lease (OR 23843) involved in this case. BLM issued that lease to Anadarko Petroleum Company (Anadarko) on November 24, 1980, with an effective date of November 1, 1980.

The rationale for requiring a pre-leasing EIS is that the agency issuing the lease should be aware of the environmental impacts of such leasing at a time at which it maintains a maximum range of options. 3/ The purpose of environmental review is to educate the agency and the public about the environmental consequences of issuing a lease. However, where, as in this case, a lease is issued without preparation of an EIS, or the retention, in the lease itself, of the right to preclude environmentally destructive activities, a subsequent proposal to undertake activities on the lease does not necessarily trigger the requirement for an EIS. What must be examined at the post-leasing stage is the extent of the proposal itself. In this case, based on the history of this lease, as set forth herein, the limitations placed on the proposal, and the fact that there is no proposal for lease development and production, BLM correctly concluded that no EIS was required.

The Sierra Club and the Oregon High Desert Study Group filed a lawsuit in 1975 in the United States District Court for the District of Oregon seeking to prevent the issuance of geothermal resource leases in the Alvord Desert Known Geothermal Resource Area (KGRA), the location of OR 23843, without the preparation of an EIS. The District Court denied the plaintiffs' motion for preliminary injunction, and upon appeal to the Court of Appeals for the Ninth Circuit, that court affirmed. Sierra Club v. Hathaway, 579 F.2d 1162 (9th Cir. 1978). 4/ The District Court subsequently dismissed the lawsuit on January 21, 1980, following lack of prosecution by plaintiffs (BLM Answer at Exh. 2).

Thus, on April 29, 1980, when BLM accepted Anadarko's high bid for three geothermal leases, including OR 23843, no lawsuit overshadowed that action. In addition, after the U.S. Fish and Wildlife Service (FWS) issued an emergency rule on May 28, 1980, granting the Borax Lake chub endangered species status for 240 days, BLM engaged in the necessary section 7 consultation with FWS required by ESA, 16 U.S.C. § 1536(a)(2) (1988), which resulted in the issuance of a biological opinion. Although FWS concluded that leasing with the stipulations proposed

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3/ The Court of Appeals for the Ninth Circuit has ruled that "an EIS must be prepared before any irreversible and irretrievable commitment of resources." Conner v. Burford, 848 F.2d at 1446.
4/ In describing the scope of its review, the Court of Appeals stated: "Our review at this juncture is limited to the propriety of the denial of injunctive relief and we intimate no review regarding the merits of the underlying controversy." 579 F.2d at 1166.

by BLM would be likely to jeopardize the continued existence of the Borax Lake chub, it suggested reasonable and prudent alternatives "[t]o avoid jeopardy to the species" (Biological Opinion, dated Oct. 10, 1980, at 7). In response thereto, BLM developed four stipulations to address those reasonable and prudent alternatives and informed FWS, by memorandum dated October 29, 1980, that absent objection, it would proceed to issue geothermal resource leases with those stipulations (BLM Answer, Exh. 5). 5/ There is no evidence in the record of an objection by FWS. The lease in question contained those stipulations (Statement of Reasons, Exh. M).

In 1982, Anadarko submitted a plan of operations to drill and test flow three exploratory wells on OR 24843 (BLM Answer, Exh. 7). Sierra Club, Oregon Chapter, supported that plan and made no challenge to the lease itself (Anadarko Answer, Exh. B). BLM approved the drilling, but Anadarko did not proceed with the drilling. In 1988, Anadarko proposed a plan of operations to drill and test flow an observation well on OR 23843. BLM prepared an EA (OR-020-8-62) and approved the drilling. There is no evidence that appellants objected to that drilling or challenged the underlying lease. Anadarko drilled that well in October 1989.

The record shows that the proposed drilling under consideration in this case will provide valuable information concerning the existence of geothermal reserves beneath the well sites, improve knowledge of the geology and hydrology of the area surrounding Borax Lake, and help determine the potential for a productive geothermal resource. At present, there is no certainty that Anadarko will proceed to develop the lease. The wells in this case are observation wells, not production wells.

While, as appellants argue, "[c]ontinued exploration only makes sense as a prelude to production" (Statement of Reasons at 37), Anadarko and BLM counter that it remains highly uncertain whether the nature and extent of geothermal reserves will support full scale geothermal development and production. Anadarko correctly contends that segmentation is proper in this case because development and production remain speculative at this time.

5/ The stipulations, as set forth in the letter, are:

"1. No drilling or other surface disturbing activities will be allowed within the area shown on Exhibit A [an oval buffer zone approximately 1-2/3 miles long and 1.1 miles wide precluding drilling within approximately one-half mile of Borax Lake] except that vehicular travel on existing roads and trails and casual exploration will be allowed.

"2. An operating plan proposing drilling must include a plan to monitor the water quantity and quality in Borax Lake and springs NW of the lake.

"3. Upon notification by the Supervisor or other authorized party that there has been a significant change in water quantity or quality of Borax Lake, all operations will cease until the problem has been identified and resolved.

"4. The lessee will supply all nonconfidential chemical and physical data on aquifers obtained through its drilling program to FWS and USGS."

BLM points out that even if sufficient reserves exist, future development might be precluded by external factors.

This is not a case in which the lessee seeks to ride roughshod over environmental considerations and has somehow wooed BLM into accepting its position. Quite to the contrary, BLM has given careful consideration to Anadarko's proposal and, while approving it, has included in that approval additional restrictions, including a ban on drilling during the months of June, July, and August, and a requirement for extensive monitoring of Borax Lake over an extended period of time. In addition, BLM has developed a contingency plan to relocate the chub should that be necessary. Even appellants' expert, Dr. David Huntley, admits that only "a possibility exists that the flow-testing of well 66-22-A [one of the two observation wells to be drilled], will have an observable impact on Borax Lake" (Huntley Affidavit at 4). 6/

Appellants seek to expand the scope of the present proposal to include development and production. That is not what is proposed, however, and it is recognized that a distinction can be made between the contemplation of a project and the actual proposal for such a project. Kleppe v. Sierra Club, 427 U.S. 390, 403-06 (1976). The proposal in this case is the drilling of observation wells and the collection of data; it is not development of the geothermal resources. Moreover, to the extent that appellants would require that no action take place until more information is gathered on the geology and hydrology of the area to be evaluated in an EIS, they offer Anadarko and BLM only a "catch-22" solution. Appellants' arguments to the contrary notwithstanding, the proposed test drilling under consideration is the sort of activity that is necessary to generate the type of data that is required to evaluate the environmental impact of geothermal development of the lease.

Finally, this is not a case where geothermal development by Anadarko will escape environmental scrutiny. It is clear that should Anadarko propose to develop the geothermal resources on the lease and enter into production, such a proposal will constitute major Federal action for which an EIS will be necessary. In addition, Anadarko admits that it would not "proceed with construction of a geothermal plant if full-field geothermal production jeopardized the Borax Lake chub. Indeed, any such course of action would be prohibited by the ESA, 16 U.S.C. § 1536(a)(2)" (Anadarko Answer at 44). Thus, the substantive mandate of ESA insures, and Anadarko

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6/ BLM presents the affidavit of one of its geologists who observed that based on the gallons proposed to be pumped from the test wells during the 4-hour test flows, "there would be no observable effect on lake level, even if water was pumped directly out of the lake -- the lake would continue to overflow during pumping due to recharge" (BLM Answer, Exh. 1 (emphasis added)). The geologist also calculated that even assuming no recharge, a 4-hour test flow pumped directly out of the lake would lower the lake only 0.35 inch. Id.

recognizes, that production on the lease may not proceed if it will jeopardize the Borax Lake chub.

There is no evidence that BLM violated the procedural requirements of ESA by failing to initiate formal consultation regarding the present exploration proposal. Although the 1980 biological opinion had indicated that formal consultation would be necessary in the event of the filing of a plan of operations, FWS required only informal consultation for the 1989 test well drilling and concluded that there would be no adverse affect on the Borax Lake chub. The record shows that BLM has made available for FWS all information concerning Anadarko's proposed drilling. FWS has not requested reinitiation of formal consultation for the present proposal.

For these reasons, I agree that BLM properly approved Anadarko's plan of operations to drill and test flow two observation wells and to deepen a pre-existing observation well.

Bruce R. Harris
Deputy Chief Administrative Judge